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RATE MAKING IN DOMESTIC WATER TRANSPORTATION

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Water traffic falls naturally into two quite distinct classes: (1) high grade, package or miscellaneous freight, such as is transported in barrels, boxes and other forms of containers, and (2) low grade, coarse, heavy freight, such as is generally transported in bulk in ship-load lots. The latter class greatly predominates in tonnage, while the former predominates in value on most of the domestic water routes of the United States.

There is an equally marked distinction in the type of carriers handling these two kinds of traffic, and in the character of service which they render. Package freight is carried almost entirely by steamship lines operating upon regular schedules between fixed terminals, while bulk freight is handled largely by freight steamers, sailing vessels and barges which have no regular schedule, and often no regular route. This is especially true of the tramp vessel, which goes from port to port, carrying any kind of a cargo it can obtain. While there are exceptions to the above classification of water traffic and water carriers, the distinction made is sufficiently clear to deserve recognition in any discussion of water rates, or in the framing of measures for the regulation of water carriers.

The methods of rate making in water transportation are quite different for the two types of carriers, due to the two classes of traffic distinguished above. Regularly established lines, in so far as traffic conditions will permit, follow methods developed by rail carriers. Their rates tend to become, like rail rates, certain published charges applicable alike to all shippers. They often cooperate with railroads in making classifications, publishing joint rates and exchanging freight. The rates of bulk carriers, on the other hand, and the methods of determining them, are essentially different, owing to the character of their business and the more competitive conditions encountered. Bulk freight rates are generally a matter of bargain or agreement between the shipper and the shipowner or agent. They are not published, nor are they the same for all shippers.

The general principle upon which water rates are made is to charge "what the traffic will bear." The cost-of-service principle is less prominent in making water rates than rail rates, because the former are less subject to regulation. When entirely free from restriction, a carrier either by rail or by water will fix its charges primarily in accordance with the value of the service, and only secondarily with reference to the cost of service. In determining the reasonableness of rates, however, any governing body is more apt to emphasize the latter principle than the former. The Interstate Commerce Commission, in numerous instances, has based its decision as to the reasonableness of railroad rates upon the cost-of-service principle.¹

In the following pages are presented in some detail the methods of rate making of regular steamship lines, and of bulk freight carriers. The peculiarities of the two kinds of water rates are also described, and some illustrations given of the practical application of the general principle on which water rates are made. The discussion is confined entirely to freight traffic and to domestic water carriers.

I. Class and Commodity Rates of Regular Steamship Lines

For convenience in making charges, regular steamship lines usually classify their traffic and publish tariffs of class and commodity rates just as railroads do. The more developed and better organized the service, the more completely are railroad methods adopted. Regular lines also, as a rule, exchange freight with connecting railroads. The proportion of their traffic so exchanged is usually larger than that carried from one port to another. In the case of port-to-port traffic, a water line affords but a single route, whereas, in connection with railroads, a water line may be a link in a large number of routes. Where coöperation exists between railroads and steamship lines, physical connection is, if possible, established and traffic transferred from one to the other on through rates and through bills of lading. Where coöperation does not exist, both carriers usually charge the full local rates, and the traffic exchanged must be rebilled at the transfer port. The shipper may also be subject to the further inconvenience, as well as expense, of conveying his consignment from the terminal of one carrier to that of the other.

¹ M. B. Hammond, *Railway Rate Theories of the Interstate Commerce Commission*, p. 42.

Coastwise steamship lines sometimes exchange freight with one another, and with river lines, as well as with railroads. Where there is coöperation between the connecting lines such exchange is made on through rates and through bills of lading, thereby affording the shipper in many instances an all-water service where no single through line exists.

In accordance with the foregoing facts, the rates of regular steamship lines may be divided into class and commodity rates as regards the kinds of traffic transported, and into joint rail-and-water rates, port-to-port rates, and joint water rates as regards the character of the route.

Classification.—In classifying their traffic, regular steamship lines make use of the classifications developed by railroads serving the same general territory. The more important lines are represented on railroad classification committees and participate in the preparation of classifications. Steamship lines operating on the Atlantic coast between New England and middle Atlantic ports, as well as lines on the Great Lakes operating between Lake Erie and western lake ports, use the official classification. Steamship lines operating to the south Atlantic ports use the southern classification, while the lines operating to Galveston and other Texas ports use the western classification. The western classification is also used by regular steamship lines on the Great Lakes, operating between Lake Michigan and Lake Superior ports, and by Pacific coast lines operating to ports south of San Francisco. Lines operating north of San Francisco do not publish class rates, owing to the unsettled conditions in that region, and the lines operating between the Atlantic and Pacific coasts via the Isthmian routes do not use any classification, following the practice of transcontinental railroads on shipments between the Atlantic seaboard territory and Pacific coast terminals.

Although, as just stated, most steamship lines publish class rates, following the practice of railroads, the proportion of their traffic carried on such rates is often very small. Classified freight, however, is carried in important quantities by steamship lines operating between north Atlantic and middle Atlantic ports, and also southbound from these ports to south Atlantic and Gulf ports. Classified freight is also transported in important quantities westbound on the Great Lakes from Lake Erie ports to Chicago, Duluth and other western lake ports.

Terminal and Insurance Charges.—The class and commodity rates of regular steamship lines on package freight usually absorb all terminal charges as do rail rates on such traffic. All the charges incidental to the transfer of freight from one carrier to another are also, as a rule, absorbed in the through or joint rates. For small consignments, such charges may be additional to the rates. Wharfage charges are also absorbed at a large majority of ports. Important exceptions are Savannah and Key West on the Atlantic coast and San Pedro on the Pacific coast. For demurrage, storage, warehousing and other services of like nature, steamship lines generally make extra charges, following the practice of railroads. Special charges, such as the state toll of five cents per ton which is collected upon all traffic at the port of San Francisco, are paid by the shipper in addition to the water rate.

Water lines do not have the same liability for damage to freight carried as do railroads. Therefore cargoes shipped by water are usually insured. Some regular steamship lines absorb the charge for marine insurance in their rates. This is especially true of the lines operating between north Atlantic and middle Atlantic ports, and also of the standard lake lines on westbound traffic since 1907. In the case of joint rail-and-water rates, the charge for marine insurance is also absorbed in some cases. Steamship lines whose rates do not include marine insurance will usually insure goods for the shipper for an additional charge. On shipments to south Atlantic and Gulf ports this charge amounts to 15 cents per \$100.00 valuation, and on northbound shipments from Texas ports the charge is 20 cents. A shipper may insure his consignment with an insurance company, instead of the steamship company, if he prefers. Large shippers sometimes insure all of their consignments between certain ports for a year with some company, taking out what is known as a blanket policy. By this means they are able to effect a considerable saving.

Publication of Tariffs.—The port-to-port business of steamship lines is not under the jurisdiction of the Interstate Commerce Commission. Therefore, the rates on such traffic need not be published and filed with the commission. The same is true of joint water rates. The more important lines, however, publish such tariffs and supplements for the convenience of the shipper, and in a number of cases voluntarily file such rates with the Interstate Commerce Commission.

Joint rail-and-water rates are subject to the jurisdiction of the commission, and must be published and filed in the same manner as rail rates. The preparation and publication of such tariffs is much more complicated and expensive than is the case with tariffs of port-to-port rates. The latter tariffs may embrace but a comparatively few ports, while the former may contain rates for several thousand points of origin, and as many more points of destination.

Joint tariffs of rail-and-water rates are usually published in one of three ways: (1) by a water line with the participating rail lines concurring; (2) by a railroad with the participating water lines concurring; (3) by an agent representing either a number of rail lines or water lines, or both. A good example of the publication of tariffs of joint rail-and-water rates by a water line is that of the Ocean Steamship Company of Savannah, which publishes and files with the Interstate Commerce Commission joint freight tariffs of class and commodity rates, southbound from north Atlantic ports and interior points to Savannah and Jacksonville. One of these tariffs (I. C. C. No. 315) applies to shipments from some 2,400 interior points in New England via Boston, and another to shipments from a large number of points in the territory east of the Pittsburgh and Buffalo line via New York. In making the joint rates from the New England territory, the various interior points are grouped and the rates from each group are made by adding certain arbitraries to the water rates from Boston. There are some ten groups in all, but group number 1 includes more than 90 per cent of all interior points covered by the tariff on Savannah shipments. The joint class rates for this group are higher than the Boston rates by the following arbitraries, which in almost all cases are considerably less than the local rates:

Classes.....	1	2	3	4	5	6
Arbitraries.....	13	12	12	9	8	9

The railroads connecting with the Ocean Steamship Company at Boston do not concur in the tariff and will not accept less than the full local rates on this through traffic. The Ocean Steamship Company, therefore, in order to publish through rates is obliged to absorb the difference between the above arbitraries and the local rates. In some instances this leaves as compensation for the water haul less than half the Boston rates. In other words, the company

carries some of the traffic received from interior points at about half the sum obtained for Boston shipments. In some of the territory tributary to New York a similar situation exists, but the local rates are somewhat lower per ton-mile than those from interior New England points to Boston.

An illustration of the publication of joint tariffs by a railroad with the participating water lines concurring is the Pennsylvania Railroad's joint tariff of class and commodity rates (J. J. I. C. C. No. 403) applying from stations along its lines and connections via New York to the south Atlantic ports reached by the Clyde and Mallory Steamship lines. The Pennsylvania Railroad also published a tariff of joint rail-and-water rates to Charleston and Georgetown via Baltimore (J. J. I. C. C. No. 404) and a tariff of joint rates from New York to Chicago, Duluth, and other western lake ports, and points beyond the lakes, via the Anchor Line, which it controls, and connecting carriers. (G. O. I. C. C. No. 3870.)

Tariffs of joint rates covering a large area are frequently prepared and published by agents in the employ of two or more lines, in order to reduce the expense, which, in some cases, is very large. For example, the Mallory and the Morgan Steamship lines, both of which operate between New York and Galveston, employ Mr. William J. Sedgman as agent and attorney to publish for them a joint freight tariff of class and commodity rates from New York and points in Atlantic seaboard territory to Texas points. This tariff (I. C. C. No. 60) names a large number of participating carriers. The rates published therein apply from some 4,500 points of origin and to more than 2,800 points of destination. Mr. F. A. Leland, as agent and attorney for the southwestern rail lines and the Mallory and Morgan Steamship lines, publishes a tariff of joint rates northbound from Texas points to points in the seaboard territory. This tariff (I. C. C. No. 1036) covers some 3,000 points in Texas, and more than 4,000 points of destination. Mr. J. C. Cottrell, successor to John A. Ryan, as agent and attorney for the Merchants and Miners Transportation Company and the Old Dominion Steamship Company, publishes joint freight tariffs of class and commodity rates southbound from the north Atlantic ports and interior points to some 3,000 local and junction points in the South and Southwest. (I. C. C. No. 22; I. C. C. No. 18.) Most of the rail connections are made at Norfolk or Newport News.

The joint freight tariffs filed with the Interstate Commerce Commission sometimes contain what are called proportional rates. These are usually lower than port-to-port rates, and are applicable to shipments to interior points for which no specific through rate has been provided. Sometimes tariffs of only proportional rates are filed with the Interstate Commerce Commission. Although the commission's authority over such rates has been questioned, since they apply only to the water haul of through shipments, so far it has not been contested in the courts. The Merchants and Miners Transportation Company, however, has filed such tariffs under protest since 1906.

The publication of tariffs of joint rates in the manner described above, and the division of such rates among the participating rail-and-water carriers, requires the coöperation of the parties to the pro-rate. Steamship lines publishing or participating in such tariffs are generally members of railroad traffic associations where such rates are discussed. Mr. Raymond, vice president and general manager of the Clyde and Mallory Steamship companies, testified before the House Committee on the Merchant Marine and Fisheries on this point as follows:

The traffic officers of the various companies, both rail and water, meet in conference, I think it is every 60 days, to discuss, as I understand it, . . . and the rates are announced and put in effect. It is clearly with the permission of the Interstate Commerce Commission, by which all this traffic is regulated, except the port-to-port business. (*Proceedings in the Investigation of Shipping Combinations*, vol. II, p. 1162.)

Mr. Raymond was referring to the meetings of the Southeastern Traffic Association, with headquarters at Atlanta. The Clyde and Mallory Steamship companies have been represented in such conferences since the formation of the Southern Railway and Steamship Association, in 1875.

Joint rail-and-water rates, being subject to the jurisdiction of the Interstate Commerce Commission, as stated above, must be maintained in the same manner as rail rates. The same is true of proportional water rates. Port-to-port rates, on the other hand, are not subject to such regulation, and need not be maintained except at the option of the carrier. In actual practice, however, there appears to be little rebating or rate cutting by the more important steamship lines on package freight, where conditions are settled.

Where conditions are unsettled, however, either rates are not published at all, or, if published, are not maintained, but used mainly as a convenient basis for determining actual rates.

Rate Adjustments.—In making their rates regular steamship lines are guided by the charges of competing rail lines, steamship lines and other water carriers. In actual practice there is almost always an adjustment of rates rather than active competition between the regularly established routes, both rail and water, just as is the case between parallel railroads. With tramp vessels, however, no adjustment of rates is possible. Their rates must be met or the business surrendered. Such competition affects mainly the port-to-port business and the lower grades of traffic. Lines operating between New England and middle Atlantic ports encounter practically no competition from tramp vessels, since their business consists largely of high-grade freight and the routes are comparatively short, while lines operating northbound from Gulf ports and south Atlantic ports to New York usually find it necessary to compete with tramp vessels for low-grade freight in order to complete their cargoes. On the Pacific coast regular lines operating between San Francisco and Oregon and Washington ports encounter tramp competition on practically all their traffic. This accounts for the unsettled conditions in that region, already referred to. Even the higher grades of traffic shipped northbound are not free from competition, for the lumber schooners, rather than return empty, will take this traffic at almost any rate they can get.

The adjustment of rates between regular steamship lines serving the same ports usually results in identical port-to-port rates. In a few cases weaker lines are allowed a small differential below the rates of the established lines. For example, the published rates of the five lines operating on the Great Lakes between Buffalo and Chicago are practically identical. The same is true of the five steamship lines operating between San Francisco and San Pedro (port of Los Angeles) on the Pacific coast. On the Atlantic coast there are only a few cases where two or more lines serve the same ports. The three lines operating between Baltimore, Md., and Norfolk, Va., have the same rates, as do the two lines operating between New York and Galveston.

A good example of a case where a weaker line obtains a differ-

ential is that of the Maine Coast Company, which operates between Boston and Portland, Me., in competition with the Eastern Steamship Company. The differential enjoyed varies from one-half cent to one cent per 100 pounds for the different classes. Another case is that of the Colonial Navigation Company, which operates between New York and Providence in competition with the New England Steamship Company, controlled by the New York, New Haven and Hartford Railroad. It enjoys a differential of two cents per 100 pounds on all the six classes.

In the foreign trade, apparently, written agreements in regard to rates are often entered into by the competing steamship lines. In the domestic trade, however, owing to the existence of the Sherman law, identity of rates is most frequently arrived at by a tacit understanding between the interested parties. By means of conferences or otherwise, competing lines keep each other informed in regard to matters of common interest. Before any change in rates is made it is talked over. Harmonious action almost invariably results. Mr. H. H. Raymond, vice president and general manager of the Clyde and Mallory lines testified before the House Committee on the Merchant Marine and Fisheries that the Mallory Line and the Morgan Line to Galveston notified each other of any proposed change in rates. If one line raised or lowered its rates the other made the same change.²

Practically all the steamship lines out of New York engaged in the southbound coastwise trade are members of the Coastwise Freight Conference, the purpose of which is the economical printing of tariffs and the regulation of other matters of common interest. The standard lake lines also have an association in which rate adjustments and other matters are discussed. Each line, however, publishes its tariffs separately.

During the last decade there has been scarcely a single instance of a rate war between competing steamship lines engaged in the domestic coastwise trade. The few important ones that occurred in the preceding decade usually resulted from the attempt of a new

² *Report of the Committee on the Merchant Marine and Fisheries on Steamship Agreements and Affiliations in the American Foreign and Domestic Trade*, vol. iv, p. 391. Hereafter this report is referred to in the text as vol. iv.

line to inaugurate a service in competition with an established line. These rate wars were almost always of comparatively short duration. Either the weaker line was crushed out, or an understanding reached providing for the elimination of further competition and a restoration of rates. Under present conditions it is almost impossible for new lines to enter the field if opposed. The report of the Committee on the Merchant Marine and Fisheries calls attention to a variety of ways by which the established lines can keep other lines out (vol. iv, p. 392). Among the most important may be mentioned (1) the refusal of the railroads controlling or coöperating with the established lines to enter into prorating arrangements with a new line, thus confining its business practically to port-to-port shipments, and (2) the control of terminal facilities by railroads or established lines, which amounts practically to a control of the water routes.

In adjusting their rates with respect to competing rail rates, the usual practice of steamship lines is to fix them at a figure which will secure a satisfactory share of the traffic. In other words, they charge "what the traffic will bear." Three possible adjustments result from the application of this principle. In a large majority of cases the water rates are lower than the rail rates by certain differentials which are supposed to compensate the shipper for any disadvantages or inconveniences of the water service, or which are forced by tramp competition. In a few cases the water rates are made equal to the rail rates, especially where steamship lines afford a prompt and reliable service, and tramp competition is absent. In one or two instances the water rates are higher than those of competing railroads, because of the promptness of the service afforded, or some other special advantage enjoyed by the water route.

A brief description of the adjustments between rail and water rates on the principal domestic routes will illustrate how charging "what the traffic will bear" works out in actual practice. Table 1 shows the adjustments of rail and water rates along the north Atlantic and middle Atlantic coast, as far south as Norfolk.

TABLE 1—RATE ADJUSTMENTS OF ROUTES BETWEEN THE PRINCIPAL ATLANTIC PORTS NORTH OF NORFOLK, VA.

(Official Classification, except as noted)

Route	Class Rates (In cents per 100 lbs.)					
	1	2	3	4	5	6
<i>I. Identical Rates</i>						
Boston and Portland, Me:						
Rail.....	21	16	13	11	9	6
Water.....	21	16	13	11	9	6
Boston and Philadelphia:						
Rail.....	35	30	25	20	17	15
Water.....	35	30	25	20	17	15
Boston and Baltimore:						
Rail.....	42	37	32	24	20½	17
Water.....	42	37	32	24	20½	17
Boston and Norfolk:						
Rail.....	45	39	34	30	25	22
Water.....	45	39	34	30	25	22
New York and Norfolk:						
Rail*.....	32	27	23	20	15	12
Water*.....	32	27	23	20	15	12
Philadelphia and Norfolk:						
Rail*.....	30	25	21	18	14	11
Water*.....	30	25	21	18	14	11
Baltimore and Norfolk:						
Rail*.....	26	22	18	16	13	10
Water*.....	26	22	18	16	13	10
<i>II. Non-Identical Rates</i>						
New York and Portland:						
Rail.....	40	34	26	20½	17½	15
Water.....	35	30	23	19	16	14
New York and Boston:						
Rail (N. Y. N. H. & H.).....	34	29	23	19	17	15
Water.....	29	24	18	17	14	12
New York and Fall River:						
Rail.....	32	29	24	18	17	15
Water.....	27	23	18	16	14	12
New York and Philadelphia:						
Rail.....	22	18	15	12	10½	9½
Water.....	18½	14½	12½	10	9	8
New York and Baltimore:						
Rail.....	34	29	23	18	15	12
Water.....	30	25	20	16	13½	10½

* Southern classification, numbered classes only

In the first half of the table will be found the principal instances of identical rail and water rates on the Atlantic coast. Such a rate adjustment is rarely found elsewhere in the domestic trade. It will be seen that identical rates occur on all routes having either Boston or Norfolk as a terminal, except the route between Boston and New York. In the second half of the table there will be found a number of routes similar to those having identical rates, on which the steamship lines enjoy small differentials. Just why the rates are identical in one case and not in the other is difficult to understand.

The identity of rates existing on the several routes shown in the above table applies not only to the classified freight, but to practically all the traffic handled, thus showing the absence of tramp competition. Moreover, this identity of rates has existed in most cases for a considerable length of time. Where rates have changed, the change has been made simultaneously by both carriers, showing an understanding between them as to the adjustment. It is quite natural that steamship lines and railroads which coöperate as regards the making of joint rates should extend that coöperation to the rates on port-to-port business.

A comparison of the rates shown in the table from Boston to Norfolk with those from Boston to Baltimore will further illustrate the methods of rate making by regular steamship lines. Water rates are lower to Baltimore than to Norfolk—an intermediate port—because they are made with reference to the rail rates to Baltimore, which are lower than the rail rates to Norfolk. On the cost-of-service principle the water rates to Baltimore should be higher than the water rates to Norfolk, because of the greater sailing distance.

An interesting point in connection with the water rates from New York to Norfolk is that although the Old Dominion Steamship Company's port-to-port rates are identical with the corresponding rates of the Pennsylvania Railroad Company, in the division of joint rates with rail carriers it gets an equivalent of only 162 rail miles, although the actual sailing distance is 328 miles. In other words, to take an example, the Old Dominion Steamship Company receives 32 cents per 100 pounds first-class for port-to-port shipments and only about 16 cents for the same service where the shipments are exchanged with the railroads connecting at Norfolk.

The rates of steamship lines operating between the north Atlantic

and south Atlantic ports are lower than the all-rail rates by differentials which are much larger than those shown by table 1. In addition to the all-water routes, there are water-and-rail routes via Norfolk, the rates of which are less than the all-rail rates but higher than the water rates by certain differentials. The rate adjustments via these three routes are shown in table 2.

TABLE 2—RATE ADJUSTMENTS OF ROUTES FROM NORTH ATLANTIC TO SOUTH ATLANTIC PORTS

(Southern Classification)

Route	Class Rates (In cents per 100 lbs.)					
	1	2	3	4	5	6
Boston to Charleston and Savannah:						
All rail.....	87	73	62	45	37*	32
Water and rail.....	75	63	53	37	31	27
All water.....	57	47	37	29	24	19
New York and Philadelphia to Charleston:						
All rail.....	84	70	59	43	35	30½
Water and rail.....	72	60	50	35	29	25
All water.....	57	47	37	29	24	19
Baltimore to Charleston:						
All rail.....	74	62	56	43	33	25
Water and rail.....	62	52	47	35	27	19
All water.....	54	44	34	26	22	17
New York, Philadelphia and Baltimore to Savannah:						
All rail.....	84	70	59	50	41	32
Water and rail.....	72	60	50	35	29	25†
All water.....	57	47	37	29	24	19
Boston to Jacksonville:						
All rail.....	113	94	75	55	46	37
Water and rail.....	78	66	56	39	33	29
All water.....	67	57	47	33	26	20
New York, Philadelphia and Baltimore to Jacksonville						
All rail.....	106	87½	71½	51½	41	35½‡
Water and rail.....	75	63	53	37	31	27§
All water.....	67	57	47	33	26	20

* 41 cts. to Savannah.

† 21 cts. from Baltimore.

‡ 32 cts. from Baltimore.

§ 23 cts. from Baltimore.

It will be seen from the table that on shipments from New York and Philadelphia to Charleston and Savannah, the water-and-rail routes have a differential of 12 cents first-class, 10 cents second-class, and 9 cents third-class, while the all-water routes have a differential of 27 cents first-class, 23 cents second-class, and 22 cents third-class. From Boston the differentials are larger, while from Baltimore they are smaller. On shipments from New York, Philadelphia and Baltimore to Jacksonville, the water-and-rail routes have a differential of 31 cents first-class, $24\frac{1}{2}$ cents second-class and $18\frac{1}{2}$ cents third-class, and the all-water routes have a differential of 39 cents first-class, $30\frac{1}{2}$ cents second-class, and $24\frac{1}{2}$ cents third-class. From Boston the differentials are larger. The existence of the same differentials for several of the different routes is due to the grouping of both northern and southern terminals. The grading of the differentials in the same manner as the rates makes the ratio which they bear to the rail rates fairly constant.

In discussing these apparently large differentials in favor of the water routes to south Atlantic ports, the fact should not be overlooked that the water rates do not include marine insurance. If the charge of 15 cents per \$100 valuation is added to the water rates it will be seen that the differentials given above will be somewhat reduced. Nevertheless, the actual differentials are considerably larger than any existing on the routes referred to in Table 1, a fact which indicates that the steamship lines serving south Atlantic ports are not able to make even their southbound rates entirely with reference to the all-rail rates. The water-and-rail routes via Norfolk, doubtless, have some influence. Furthermore, active tramp competition exists for the lower grades of freight and exerts at least a potential influence upon the charges for the higher grades. The Interstate Commerce Commission, in a recent decision with reference to fourth section violations in the southeast, makes the following statement on this point:

In addition to the freight carried by the regular steamship companies large and important quantities of low-grade commodities move into and out of the south Atlantic ports by tramp steamers and steamers belonging to lumber companies moving loaded out of the south Atlantic ports and returning empty except for such traffic as can be obtained. Considerable tonnage is handled by sailing vessels. Cement, coal, fertilizer materials, etc., move to the south Atlantic ports in large quantities by these irregular steamships on lower rates than are afforded by the regular steamship lines. The service

of these tramp steamers, lumber steamers, sailing vessels, etc., constitutes a check upon the rates of the regular steamship lines, compelling low-rates from them, particularly as to all classes of low-grade traffic which can be handled to advantage by the irregular steamers and sailing-vessel service. (30 I. C. C. Repts., p. 170).

The facts presented in this decision of the Interstate Commerce Commission show that the all-rail rates to south Atlantic ports are lower than other rates in southern territory, but, nevertheless, are not below the actual cost of handling the business; also, that the rates of the steamship lines are so much lower than the rail rates that they get most of the traffic not carried by the tramp vessels. It appears that rather than further reduce their rates, the railroads surrender the business to the water carriers.

The adjustment of southbound rates shown by table 2 has been in force with few changes for a considerable number of years, apparently, owing to the absence of any disturbing factors. Commodity rates, as well as class rates, have been very stable. In some instances the steamship lines have even been able to raise their rates, while rail rates remained unchanged, thus diminishing the differentials. In 1907 they raised their rates simultaneously, as well as equally, to several south Atlantic ports, thereby maintaining the existing adjustments.

Tramp competition is more severe on northbound than on southbound shipments, since the traffic consists to a much larger extent of low-grade freight. Northbound rates are therefore less stable and fixed with less reference to the rail rates. In some cases, especially on lumber shipments from Jacksonville, they are made entirely with reference to the schooner rates, changing from day to day. There is, however, an apparent tendency toward more stable conditions. The Ocean Steamship Company now voluntarily files with the Interstate Commerce Commission port-to-port rates on lumber shipments from Savannah, which it is able to maintain in spite of tramp competition.

The rates of regular steamship lines operating from north Atlantic and middle Atlantic ports to Gulf ports except Galveston are made with reference to the competing rail rates, following the general rule. The differentials, however, are larger than those of the water routes to south Atlantic ports, indicating the existence of more severe tramp competition. The water rates are so much lower

than the rail rates that the railroads get very little of the traffic southbound, and practically none northbound. The rates of the two regular lines operating from New York to Galveston are made primarily with reference to the all-rail rates from St. Louis, there being no through rail rates published from New York and practically no shipments by rail.

The adjustment of water rates as regards the several Gulf ports is the same as the adjustment by rail. For example, Key West, has the highest rates because of its location at the extreme end of the Florida peninsula. The rates to Tampa are lower than those to Key West, but higher than the rates to Mobile, which, in turn, are higher than the rates to New Orleans. The following table showing first-class rates southbound from New York to these ports will illustrate the existing adjustments. The rates are in cents per hundred pounds.

TABLE 3—RATE ADJUSTMENTS OF ROUTES FROM NEW YORK TO GULF PORTS

From New York to	All rail	Water and rail via Norfolk	Water	Classification
Key West.....	172		103	Southern
Tampa.....	156	115	95	Southern
Mobile.....	123	100	75	Official
New Orleans.....	118	95	70	Official

The rates to Galveston by water are about the same as the corresponding rates to Mobile, although the sailing distance is very much greater. The first-class rate southbound from New York, for instance, is 75 cents, western classification. Not only is active tramp competition encountered, but new lines are more frequently inaugurated on this route than on any other route in the country.

The standard lake lines fix their rates in most instances with reference to the competing rail rates in the same manner as the lines serving the Atlantic and Gulf ports. The adjustment is more complete in the case of the westbound movement, since it consists largely of package freight, on which there is no active tramp competition. A considerable proportion of this westbound movement of package freight originates in New York. In addition to the all-rail route there is a rail-and-water route with transfer at Buffalo or Erie and an all-water route via the Erie Canal and Great Lakes.

In the latter case the railroads organized or acquired forwarding companies, which until recently chartered canal barges and quoted through class and commodity rates westbound from New York in connection with the standard lake lines.³ Table 4 shows the adjustment of rates by these three routes.

TABLE 4—RATE ADJUSTMENTS OF ROUTES FROM NEW YORK AND BUFFALO TO WESTERN LAKE PORTS.

(Official Classification)

Route	Class Rates (In cents per 100 lbs.)					
	1	2	3	4	5	6
New York to Chicago:						
All rail.....	75	65	50	35	30	25
Rail and lake.....	62	54	41	30	25	21
Canal and lake*.....	42	38	29	22	19	17
New York to Duluth:						
All rail.....	115	99	76	53	46	38
Rail and lake.....	68	59	45	33	28	24
Canal and lake*.....	48	43	33	25	22	20
Buffalo to Chicago:						
All rail.....	45	39	30	21	18	15
Lake lines.....	35	31	24	17	15	12½
Buffalo to Duluth:						
All rail.....	95	79	60	42	36½	29½
Lake lines.....	41	36	28	20	18	15½

* Two forwarding companies cancelled their canal-and-lake rates in the spring of 1913 and the two remaining companies in the spring of 1914.

It will be seen from the table that the differentials enjoyed by the lake routes to Duluth are much larger than those of the lake routes to Chicago. By rail and lake from New York to Duluth, for instance, the differential first-class is 47 cents, while to Chicago it is only 13 cents. By canal and lake, until the through rates were cancelled, the differential first-class was 67 cents to Duluth against 33 cents to Chicago. Likewise, the differential of the lake route from Buffalo to Duluth is 54 cents in contrast with a differ-

³ Cf. *Report of the Commissioner of Corporations on Transportation by Water in the United States*, part iv, p. 57; also *Report of the Committee on the Merchant Marine and Fisheries on Steamship Agreements and Affiliations in the American Foreign and Domestic Trade*, vol. iv, p. 324.

ential of only 10 cents to Chicago. The marked difference in the size of these differentials results from the fact that the rates of the lake routes to Chicago are made with special reference to the all-rail rates according to the general practice, while the rates of the lake routes to Duluth are made, apparently, with more reference to other factors, such as the competition of New York and Chicago for the Duluth market.

The lake route to Duluth especially from Buffalo is more direct than the rail route and as a result of the large differentials handles most of the traffic. The lake route to Chicago, on the other hand, is some 400 miles longer than the rail route and the differentials enjoyed are so small that the railroads carry a large proportion of the traffic. Witnesses before the House Committee on the Merchant Marine and Fisheries expressed the opinion that these differentials were not large enough to offset the disadvantages of the lake route (vol. iv, p. 329). As a matter of fact they are much smaller now than formerly, for since the acquisition of the standard lake lines by railroads they have been reduced in some cases as much as 30 per cent. This was accomplished by advancing the water rates while the rail rates remained stationary and was made possible by the absence of tramp competition.

On the Pacific coast the port-to-port rates of regular steamship lines operating from San Francisco to southern California ports are made with reference to the competing rail rates, having fairly large differentials, while on shipments from San Francisco to Oregon and Washington ports, the rates of regular lines are made more with reference to the schooner rates than to the competing rail rates. Conditions are less settled on these routes than anywhere else in the domestic trade. The traffic is not classified, and the rates on package freight are generally quoted at so much per ton as are bulk freight rates. On some commodities a measurement ton of forty cubic feet is the basis for computing rates.

There are four principal routes for shipments between the Atlantic seaboard and Pacific coast ports. In addition to the all-rail routes of the transcontinental railroads, there is an ocean-and-rail route via the Morgan or Mallory lines from New York to Galveston, and the Southern Pacific Railroad or the Atchison, Topeka & Santa Fe Railroad from Galveston to the Pacific coast. There are also two Isthmian routes—one via Panama, and the other via

Tehuantepec. The rates of the three rail-and-water routes are adjusted with respect to the all-rail rates in accordance with the general practice. The rates via Galveston are practically identical with the all-rail rates, while the rates by the two Isthmian routes are lower by certain differentials. From 1904 to 1908, westbound rates via the Panama route were less than the all-rail transcontinental rates by 30 per cent on less-than-carload and 20 per cent on carload shipments. In March, 1908, the percentages were changed to 40 per cent for less-than-carload and 30 per cent for carload lots. Since July 20, 1909, the westbound rates of the Panama route have been published in tariffs, but they still continue to be fixed at certain percentages less than the corresponding all-rail rates.

In the case of the Panama route, the Panama Railroad has two co-carriers operating between California ports and the Isthmus—the Pacific Mail Steamship Company and the Luckenbach Steamship Company. The through rates by either of these two co-carriers are identical. On the Atlantic side the Panama Railroad, owned by the Federal Government, operates its own line of steamers.

When the American-Hawaiian Steamship Company began operations via the Tehuantepec route in 1907, its rates were fixed with reference both to the all-rail rates and the rates via Panama. As a result its rates are in a number of instances identical with those via the Panama route. In a large majority of cases, however, they are slightly higher or lower, as the case may be. The rate adjustments of these two Isthmian routes, as well as the tendency of competing steamship lines everywhere to agree among themselves as to rates, has been emphasized in the recent hearings and debates on the Panama tolls question.

In view of the fact that most of the important steamship lines on the Atlantic coast and Great Lakes are controlled by railroads or shipping combinations,⁴ the question may well be raised whether the rate adjustments described above have not been brought about by such influence. The tendency of steamships, however, to make their rates, just as far as possible, with reference to the rail rates, appears to have always existed in the domestic trade. It is the practice of independent lines, as well as of those which were formerly independent, but are now controlled. Railroad or combination con-

⁴ For details regarding control consult reports referred to in footnote 3.

trol, however, may have had some influence upon the size of the differential allowed the water route. For instance, on the Great Lakes, following the acquisition of the principal steamship lines by railroads, the differentials in some cases were greatly reduced by raising the water rates, while rail rates remained stationary, and on Long Island Sound the differentials of the New England Steamship Company (N. Y. N. H. & H.) operating between New York and Providence, Fall River and Newport, were increased in 1903 by raising the rail rates while the water rates remained stationary.

Regulation of Rates.—In the preceding pages the following facts have been shown:

1. Regular steamship lines follow the practice of railroads in classifying traffic, publishing rates, exchanging freight and adjusting rates with reference to those of other routes, at least to the extent that traffic conditions will permit.

2. Under present conditions the old established steamship lines have about as complete a monopoly of their routes as railroads have.

3. Regular steamship lines, when serving the same ports, do not compete with one another, but agree as to their rates. They also agree among themselves as to the exchange of freight and the adjustment of rates in a given territory, even when not directly competitive.

4. The only active competition which regular steamship lines have to meet is that of tramp vessels. On some routes this competition has become practically negligible. On others it is still active, but diminishing in effectiveness, while on a few routes it is still flourishing, and controlling in its effect upon the rates of regular lines.

5. On routes where tramp competition is absent, the port-to-port rates of steamship lines are, in some instances, identical with the corresponding rail rates, and in others less by small differentials. In such cases water rates compare favorably with rail rates in stability, and all other respects. On routes where tramp competition still exists the rates of regular steamship lines for the lower grades of freight are most affected. On the higher grades, competition is largely potential. With the development of traffic, tramp competition tends to diminish, and the rates of regular lines tend to rise accordingly. On a number of water routes where conditions have become settled there have been important advances in rates of regular lines during the last decade, and further advances may be

expected in the future, especially if the railroads are allowed to increase their rates. In fact, tariffs of port-to-port rates, providing for such advances, have recently been filed with the Interstate Commerce Commission.

The logical conclusion to be derived from these facts is that the rates of regular steamship lines should be subject to regulation in the same manner as rail rates in order that they may not abuse the monopoly powers which they have acquired and prevent the public from realizing the advantages of cheaper water transportation.

On all traffic which is exchanged with railroads on through rates, regular steamship lines are already subject to the jurisdiction of the Interstate Commerce Commission. This constitutes in most cases a considerable proportion of their total freight business. Also, since the decision of the Supreme Court in the Goodrich Transit case in 1912, all regular steamship lines having pro-rating arrangements with railroads have been required by the Interstate Commerce Commission to furnish certain reports regarding their business. It would seem, therefore, that there would be no great hardship imposed upon them if they were placed entirely under the jurisdiction of the Interstate Commerce Commission, except possibly on certain routes where tramp competition is encountered. In such cases, if required to give the commission 30 days' notice of any change in rates, they would be unable to meet the schooner rates when necessary to complete a cargo. This difficulty could be obviated by giving the commission authority to allow such carriers more freedom in changing their rates than is at present allowed rail carriers. Discretionary power in regard to this matter would doubtless be more feasible than fixing a definite time limit, no matter how short.

II. Bulk Freight or Charter Rates

Bulk freight, such as iron ore, coal, lumber and grain, is usually carried by barges, sailing vessels or steamers in full vessel-loads of a single commodity. The shipper charts the whole cargo capacity of a vessel at a certain rate per ton, per bushel or other unit of measure, and the shipowner furnishes the crew and pays the expenses of operating the vessel. The various conditions agreed upon by the shipper and shipowner or agent are contained in a form of contract known as a charter party, of which there are various kinds.

The charges for carrying bulk freight are therefore known as charter rates.

Sometimes a shipper charters a vessel for a period of time at so much a month. He then operates the vessel, paying most of the expenses of operation. In this case, the monthly rental can hardly be considered a rate. Also, where a shipper operates his own vessel, there are no water rates. A considerable proportion of the total water-borne bulk freight traffic in the United States is transported in this way. The entire movement of coal on the Ohio and Mississippi River systems, for example, is handled in barges of the mining companies. Lumber is frequently carried in the vessels of lumber companies on the Atlantic and Pacific coasts, and also on the Great Lakes and numerous rivers.

Except in a very few cases the rates of bulk carriers are not published or filed with the Interstate Commerce Commission. Neither is there any classification of freight, since a cargo almost always consists of a single commodity.

A very large proportion of the traffic handled by bulk carriers is exchanged with railroads, but there are very few, if any, instances of joint rates on such shipments. The connecting railroads charge the full local rates, or, in some cases, proportional rates to or from the transfer port, and the water rates must be added in order to determine the total charge for transportation. The absence of prorating arrangements between rail and water carriers on bulk freight shipments is due, in part at least, to the fluctuating character of the water rates.

Terminal and Insurance Charges.—Bulk carriers, especially sailing vessels, are subject to a number of port charges, such as pilotage, towage in and out of the harbor, dockage, etc., which as a rule in domestic traffic are paid by the vessel out of the receipts for transportation. There are also a variety of terminal charges incident to bulk freight traffic, such as for loading and unloading and the use of wharves. Sometimes these charges are paid by the vessel, and sometimes by the shipper or consignee, according to the terms agreed upon in the charter. Usually lumber charters include the cost of loading and unloading, and grain and iron ore charters include the charge for trimming, or leveling in the hold (the principal loading charge), and also the unloading charge at the port of destination. The charges for trimming in the case of soft coal shipments on the

Atlantic coast are usually paid by the vessel, while on the Great Lakes they are paid by the shipper. The cost of unloading coal on all routes is paid by the shipper or consignee. Wharfage charges, where collected, are also, as a rule, paid by the shipper or consignee.

On shipments by bulk carriers marine insurance is always paid by the shipper in addition to the charter rates. The charges for insurance vary with the type and age of vessel, season of the year, destination, etc. They are usually much higher for sailing vessels than for steamers. Often bulk freight is not insured because of the high rates. This is especially true of river traffic.

Kinds of Charter Rates.—There are various forms of charter parties in use based upon the character of the freight handled. For example, there are forms for the transportation of lumber, coal, grain, iron ore, etc., which differ materially in their terms. From this standpoint there are several kinds of charter rates. As regards the duration of charters, however, two varieties of charter rates may be distinguished. A vessel may be chartered for a single trip, as, for example, to carry a cargo of coal from Norfolk to Boston, or a cargo of lumber from Jacksonville to New York. Or a vessel may be chartered for a longer service, such as to make a given number of trips, to carry a given quantity of traffic, or for a certain period of time, as for example, a year or a season of navigation. For convenience in discussion, the former variety of charter rates may be designated as trip charter rates, and the latter as time charter rates, using the term in a general sense. In addition to the time charters in which the charges agreed upon can be considered as rates, there are, as already stated, time charters in which the charges are in the form of monthly rentals. They are much more common in the foreign than in the domestic trade.

Trip charter rates are the most competitive of all water rates. They change from day to day, and often exhibit wide fluctuations in the course of a year. The fluctuating character of such rates is due to the fact that perfect adjustment between the supply and demand for vessel tonnage rarely ever exists. At one port there may be a surplus of vessels, while at another there is a scarcity. Fluctuations, however, are less violent in the domestic trade than in the foreign, owing to the shorter distances to be travelled. Time charter rates, by contrast, are fairly stable. Their purpose is to avoid such fluctuations in rates, as well as to assure adequate transportation facil-

ities. They are especially common where there is a regular movement of bulk freight in large quantities.

The methods of determining the two kinds of charter rates are not very different. Trip charter rates are bid, or auction rates, determined by the amount of available vessel tonnage at a given port, and the demand of shippers for such tonnage. In bargaining with vessel owners, the shipper considers the urgency of the shipment, the supply of vessel tonnage available, etc. The vessel owner, on the other hand, considers whether there is a likelihood of obtaining a more profitable cargo, what the prospects are of securing a cargo at the port of destination, what port charges and other expenses will be incurred during the trip, and a variety of other factors. The rates agreed upon are generally a matter of common knowledge among shippers and vessel interests. Sometimes they are published in trade papers or circulars. Occasionally, however, a deal is made between a shipper and a vessel-owner or agent the terms of which do not become known. Such charters are designated in trade papers as "P. T.," meaning "private terms."

Time charter rates are determined in much the same manner as trip charters, except that there are not usually as many bidders. The shipper and the shipowners bargain on the rate to be charged. The shipper is willing to pay a fair rate in order to secure adequate transportation facilities. The shipowner is guided by what he estimates his boats can earn if free to engage in all kinds of trade. As a result, time charter rates are fixed at about an average of the trip charter rates for a given period. Charter rates of this kind are less competitive than trip charter rates. They are comparable, in respect to stability, with the class and commodity rates of regular lines.

Trip Charter Rates.—On the Atlantic coast trip charter rates are frequently referred to as "open" rates, and are most common in the case of lumber and soft coal shipments. On the Great Lakes trip charter rates are known as "wild," or daily rates, and are found especially in the grain traffic. There is keen competition among the vessel interests for the transportation of these commodities, and the charter rates change from day to day. During the year 1912, for example, the range of average monthly rates on shipments of soft coal from Baltimore to Boston was from \$0.85 to \$1.50 per net ton. The highest and lowest prices were even farther apart. The rates from Hampton Roads and Philadelphia to Boston have usually

averaged about ten cents less per ton than the Baltimore rates. The range of charter rates on lumber shipments from Jacksonville to New York in 1910 was from \$5.25 to \$6.25 per 1,000 feet; in 1911, from \$4.75 to \$5.50; and in 1912 from \$6 to \$6.50. Charter rates on grain shipments on the Great Lakes in 1913 varied from 2 cents per bushel at the beginning of the season to $1\frac{1}{4}$ cents in August. Usually grain rates increase towards the close of the season of navigation. This did not happen in 1913 because of the unusual prolongation of the open season, but in 1912 the final cargoes paid from $3\frac{1}{4}$ cents to 5 cents per bushel. In 1891 occurred the widest fluctuations in grain rates that have ever been noted, the range varying from $1\frac{3}{4}$ cents to $9\frac{1}{2}$ cents per bushel. The lumber movement on the Pacific coast is also handled largely by steam schooners on trip charters. From Puget Sound ports to San Francisco the range of charter rates was from \$3.50 to \$4.75 per 1,000 feet in 1910, \$4 to \$4.50 in 1911, and \$4.50 to \$5 in 1912. The rates from other ports of origin, as well as to other ports of destination, are determined with relation to the above rates.

Time Charter Rates.—Time charters are most common in the soft coal trade on the Atlantic coast, where they usually cover a year and occasionally a longer period of time, and in the iron ore and coal trade on the Great Lakes, where they cover the season of navigation. These lake time charters are generally known as season contracts. They provide for the delivery of a certain quantity of ore or coal each month during the season of navigation.

The contract rates on iron ore are usually made early in the spring. Before the season of navigation opens the few large shipping consolidations and various vessel agencies (some of which are mine owners, as well as vessel operators) contract directly with the iron and steel companies for the delivery of a given quantity of ore each month at the rate agreed upon. These large companies and vessel agencies in turn sub-let to vessel owners such part of the business as they are unable to handle themselves, receiving a commission therefor. Some vessel owners contract up to their full capacity. The more usual practice, however, is to contract for only a portion of their vessel tonnage, reserving the remainder in order to take advantage of any increase in ore rates during the season of navigation, or to participate in the grain movement if grain rates advance, as they frequently do, in the autumn months.

Thus it appears that the great bulk of iron ore traffic is transported each season at a fixed rate agreed upon before the season of navigation opens. The fixing of this rate in the manner described is made possible by the inter-relationships and affiliations existing among the various interests. According to the report of the Committee on the Merchant Marine and Fisheries (vol. iv, p. 341) there are eight large consolidations of bulk carriers on the Great Lakes, and twenty-nine other groups of lesser importance. The eight principal consolidations are not only inter-related, but also, affiliated with the other twenty-nine groups, forming a vast community of interest, which controls a considerable proportion of the entire vessel tonnage. The Pittsburgh Steamship Company, controlled by the United States Steel Corporation, is the largest of these shipping consolidations. In dull years, such as 1911, it handles nearly half of the total iron ore tonnage of the Great Lakes, while in more prosperous years the percentage handled is less. The general impression is that through the inter-relationships and affiliations referred to above, this company exercises an important, if not a controlling influence upon the contract rates for the iron ore traffic. Although these rates have declined very markedly in recent years, owing to the improvement of channels and the increased size of vessels, the general belief is that they are fixed at a point which yields a fair return upon the investment.

There is an interesting connection between the lake rates on iron ore and those on coal and grain. Coal forms the principal return load for the ore and grain steamers. As a result, coal rates are very low in comparison with ore rates, but when added to them, are considered to give a profitable round-trip return. Coal rates to Duluth and other Lake Superior ports are lower than to Milwaukee because of the larger vessel tonnage returning in that direction. Grain from the Lake Superior ports is a direct competitor of iron ore for vessel tonnage. As a result, grain rates from Duluth are always higher than from Chicago, and exert an important influence upon the "wild" or daily rates on iron ore. If grain rates rise, the "wild" or daily rates on ore will rise also.

Anthracite Coal Rates.—The rates on shipments of anthracite coal from New York and Philadelphia to New England ports differ radically from rates usually found on bulk freight shipments. This traffic is handled almost entirely by barge lines which are controlled

by the railroads connecting with the anthracite coal mines. The several barge lines engaged in this trade charge the same rates between the same ports. For a number of years the charge has been 40 cents per ton from upper New York harbor terminals to Long Island Sound ports, and 50 cents to Boston. From lower New York harbor terminals the rate is 5 cents higher. From Port Reading, Philadelphia, to Sound ports the rate has been 65 cents per ton, and to Boston, 75 cents. The stability of these hard coal rates is comparable with the class and commodity rates of regular steamship lines. Possibly they should not be considered as rates at all, but merely as bookkeeping costs.

On January 2, 1913, the Lehigh Valley Transportation Company, which operates the Bee Line barges, filed a tariff with the Interstate Commerce Commission, showing an increase in the rates on anthracite coal to points north of Cape Cod. This is one of a very few instances where a tariff of port-to-port rates on bulk freight shipments has been filed with the commission.

Regulation of Bulk Carriers.—It has been shown that there are two quite distinct classes of bulk carriers and bulk freight rates. Thus far neither has been subject to any regulation. The rates of tramp vessels are fluctuating in character, and their business is of such a nature that any attempt at regulation would seem impossible, as well as inadvisable. Moreover, there has been little concentration of vessel interests of this type. On the other hand, the rates of bulk carriers operating on time charters are more stable, and usually relate to larger business organizations. The influence upon rates of large combinations of these bulk carriers, such as are found on the Great Lakes, and their affiliations with important mining and manufacturing interests, points to the necessity of some regulation. Possibly greater publicity in regard to their business relations and activities would prove sufficient. If not, they should be placed under the jurisdiction of the Interstate Commerce Commission just as has been proposed for regular steamship lines and their rates regulated in the interests of the public.